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CONTAINER DEPOTS ARE NOW OPEN THROUGHOUT THE PROVINCE

Poster by Jim Norton
Crescent Heights High School
Calgary
Best grade 10 poster
Environment Week 1972
poster contest

January 1973

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Water cooling experiment at Wabamun power plant

Calgary Power Ltd. has undertaken a unique water cooling test program at its Sundance coal-fired power plant on the south side of Lake Wabamun, 45 miles west of Edmonton.

The program will test the theory of cooling water using spray modules, or fountains, that dissipate heat to the atmosphere.

The Sundance plant borrows large quantities of water from the lake, and cooling the water before returning it to the lake has been the subject of testing and research at the plant recently.

Spray systems are unprecedented in power plants in Canada, and could provide an alternative to cooling towers or other devices.

The experimental modules -- there are six modules, each containing four sprays -- disperse water in a fine spray 17 feet into the air, releasing heat to the atmosphere.

During the testing program water temperatures before and after the spray complex, will be recorded to determine the system's effectiveness.

The spray modules could be used in a closed circuit cooling system, where a miniature lake is created -- cooling ponds in engineers'

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Honourable W.J. Yurko
Minister

Dr. E.E. Ballantyne
Deputy Minister

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language -- and the modules dot the surface of a pond to cool the water before its return to the plant.

Capital costs for cooling the water could run as high as \$31.2 million and resulting annual costs would be passed on to the consumer.

The current temperature of the water returning to the lake from the Sundance plant varies between 55 and 85 degrees, dependent largely on the season, says senior company engineer Walt Saponja. "But of course that doesn't mean the lake temperature is increased by that much. The heat quickly dissipates to the atmosphere and affects only a small portion of the lake."

Concern for cooling the water came after cottage residents on Lake Wabamun raised alarms about an increase in weed growth in the lake.

Waste heat for greenhouses?

Alberta's Minister of Agriculture, the Honourable Hugh Horner has announced the initiation of a pilot project to look into the possibility of using unconventional heating equipment and thermal waste water to heat greenhouses.

The project, says Dr. Horner, is the result of cooperation between officials of Calgary Power Ltd., and the Alberta Department of Agriculture. It will be carried out at one of Calgary Power's two electrical generating stations located at Lake Wabamun, 60 miles west of Edmonton.

According to Dr. Horner, the first phase will get underway this winter and it will cost about \$79,000. It involves building greenhouse facilities and testing various heat transfer systems. The basic purpose of the project is to find out whether using this heat in greenhouses will eliminate the use of expensive and unproductive cooling systems.

William Hutchison, Provincial Greenhouse Crop Supervisor at the Alberta Horticultural Research Center at Brooks, will be the project leader and will coordinate the Departments of Agriculture, Environment and Public Works. Calgary Power Ltd. has agreed to provide the site and electrical requirements as well as the waste heat from its generators.

Dr. Horner says the present project is the first of several that are planned to use the heat provided by thermo-generating stations in the province. Calgary Power's two plants on Lake Wabamun produce enough hot water to heat approximately 120 acres of greenhouses. Since the entire greenhouse acreage in the province is only 75 acres there is room for expansion if the project is feasible.

\$ MILLION PEP PROGRAM

The Honourable W. J. Yurko, Minister of the Environment, has announced that his department is undertaking winter works programs under the provincial government's Priority Employment Program which will generate over 36,000 man-days of work, and cost more than \$1 million.

The majority of the department's programs are water resource management projects, such as the clearing of reservoirs and river channels, and erosion control.

The department is paying for the entire cost of 25 such projects, while picking up half the cost of 27 others.

Included in the cost-sharing projects is the construction of flood control dykes at the Town of Peace River, expected to cost \$100,000.

The department's Environmental Protection Service has hired a crew and their water well drill from the Elizabeth Metis Colony to drill 20 wells on their colony, as well as the Fishing Lake and Kikino Colonies.

The drilling rig is owned by the Elizabeth Colony. A geologist has been hired to supervise the program, and at the same time teach the crew logging and development techniques so that after the project is completed in the spring, the crew will be familiar with all aspects of the operation. The training and experience gained will give the crew an increased proficiency in well completion.

A program will also be carried out to take soil samples from farm land in Alberta that has been treated with Tordon, a persistent herbicide, to determine the amount of toxic residue.

A second project in the department's Lethbridge laboratory will check the amount of movement of the herbicide in Alberta soils.

REGIONAL OFFICES OPEN

The Department of the Environment's Pollution Control Division has opened regional offices in Red Deer and Whitecourt.

The Red Deer office is located in Room 207 of the Provincial Building, and the Whitecourt office at 5012-52 Avenue.

Environment Minister W. J. Yurko points out that this decentralization will insure that more areas of the province have direct

access to the services offered by the division, while at the same time reducing the cost of these services now being administered from Edmonton.

He is confident that this move will result in increased efficiency.

Both offices will be headed by senior engineering technicians: Luke Stang in Red Deer and Frank Chiles in Whitecourt. Both have previous experience in government pollution control work, and in the gas processing industry.

Their prime responsibility will be the operation of the air pollution control branch's mobile rural monitoring laboratory, and the maintenance of rural sampling networks.

They will also investigate all pollution complaints in the area, gather samples as required, and act as a liaison with local agencies and groups, especially health officials.

The location for the regional offices was chosen on the basis of their proximity to sour gas fields, where much of the sampling is carried out.

The head office of the department is located in Edmonton and the Calgary regional office was expanded this summer.

PIPELINE AND UTILITY CORRIDOR STUDY

The Department of the Environment will commission a study of a pipeline and utility corridor from the Athabasca tar sands area near Fort McMurray to the Edmonton area.

The department will request companies, individuals and consortiums to make submissions outlining their experience and qualifications to undertake such a study. The contract for the study will be awarded on the basis of these submissions.

The study will consider the feasibility of combining future pipelines from the Athabasca tar sands with utilities and other transportation systems in a common corridor.

It will also determine the most suitable route for such a corridor taking into consideration economics, safety factors as related to human and environmental considerations, urban planning, and existing and projected pipeline systems.



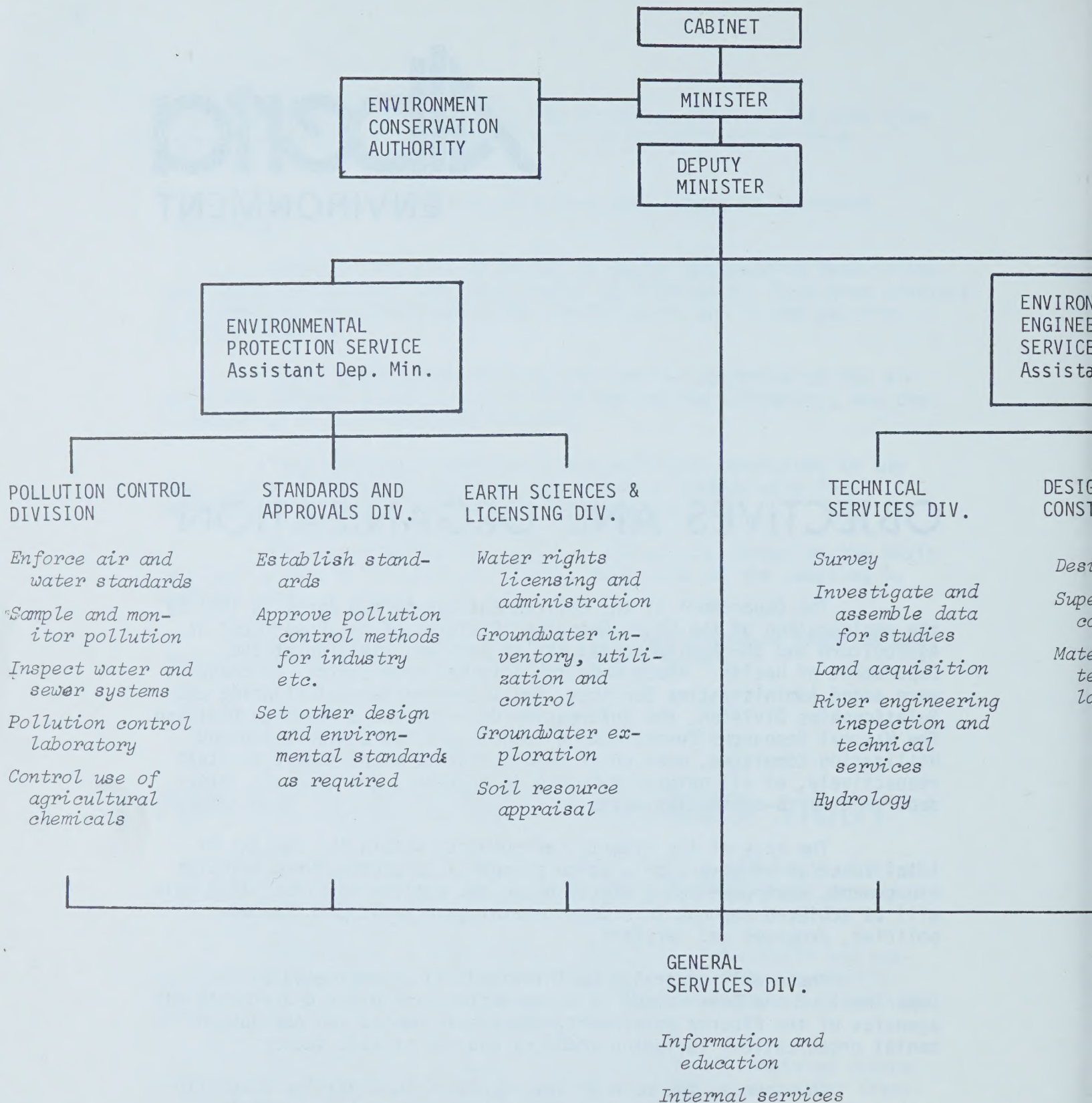
OBJECTIVES AND ORGANIZATION

The Department of the Environment was formed April 1, 1971 by the amalgamation of the Water Resources Division of the Department of Agriculture and the Environmental Health Services Division of the Department of Health. These were the original core units. To these were added Administrative Services, the Interdepartmental Planning and Relationships Division, the Information Division and a Research Division. The Natural Resources Co-ordinating Council and the Conservation and Utilization Committee, made up of Deputy Ministers and technical staff respectively, of all natural resource departments, are the main inter-departmental co-ordinating units.

The role of the Alberta Environment, within the context of total function of government, is to promote a balance between resource management, environmental protection and the quality of life. This role will be achieved through interdepartmental government planning of policies, programs and services.

These will generally be initiated and co-ordinated by the Department of the Environment in co-operation with other departments and agencies of the Alberta government, other governments and non-governmental organizations including industry and the private sector.

In essence, the role of government is to emphasize prevention rather than treatment on the basis that this principal is logical, practical and more economical. With environmental matters, this means that the government needs co-ordination, comprehensive input and long-term planning. Thus, the people of Alberta can be better assured of the development of the province's resources to enable a good quality of life in five, 50 or 500 years.



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ECA public committee outlines recommendations

The Public Advisory Committee on the Environment, an advisory body to the Environment Conservation Authority, passed a number of resolutions during 1972, dealing with a large variety of pollution areas.

The Advisory Committee also sent a letter to Alberta Environment Minister W. J. Yurko, protesting the restraints put on the Environment Conservation Authority.

The letter contained the following resolution: "The Public Advisory Committee on the Environment expresses its concern that the Minister of the Environment and the Government of Alberta should have restrained the Environment Conservation Authority from fulfilling the purpose of promoting totally free public discussion of environmental issues.

"The Public Advisory Committee on the Environment hereby requests the Minister and the Government of Alberta to rescind the recent amendment to Section 7 of the Environment Conservation Act, and to allow the Environment Conservation Authority its former freedom of action in generating public discussion of environmental problems."

At that time, Mr. Yurko replied to the resolution by pointing out that there seems to be a lack of understanding among Public Advisory Committee members as to how the government works.

"The Authority is an agency of the government. It has a vital role to lead the government into new areas of policy requirements -- not to tell us what we're doing wrong in regards to enforcing legislation. We already know that." (Edmonton Journal, October 23, 1972)

The amendment to Section 7 referred to makes the Environment Conservation Authority responsible to the Minister of the Environment. Before that, it reported directly to the Lieutenant-Governor-in-council.

Following are other resolutions passed during 1972.

POLLUTION STUDY GROUP

1. Whereas it is recognized that the automobile is a major cause of air pollution, especially under cold weather, temperature inversion

conditions be it resolved that the provincial and federal governments be urged to minimize pollution from this source by requiring:

- that emission controls on new automobiles be required to work efficiently down to -40°F.
- that it be made illegal to remove such devices.
- that an intensive program be undertaken to encourage the people to use public transportation instead of private automobiles.

2. Whereas our national parks are located many miles from our major cities and whereas many of our less privileged citizens of these cities have not sufficient time and/or money to travel to these parks, be it resolved that more emphasis be placed on the development of recreational park areas in close proximity to these centres of population and that ready access by existing public transportation systems be provided.
3. Whereas the frequency and duration of occurrence of ice fog over northerly cities is considered (a) to be detrimental to mental health and (b) to be a function of the size, shape and population density (in addition to other meteorological factors), be it resolved that a study be made to determine
 - to what extent the presence of ice fog may cause mental distress among the people and
 - whether controlling the size, shape or population density of a city could be used as a means of limiting the frequency and duration of occurrences of ice fog.
4. Whereas a problem with respect to the occurrence of ice fog over northerly cities exists during cold months, be it resolved that funds be provided to support research and development towards alleviation of this problem; for towards (a) devising practical methods and (b) designing equipment for the inexpensive removal of water vapor from flue gases emitted by gas-fired heating units.
5. Whereas the recycling of used non-renewable resources is sometimes not economically attractive to the small entrepreneur then strict emission control regulations are applied, be it resolved that market studies be made and the development of the technology and the improvement of reclamation plants be subsidized, if necessary, to assist (a) in making these operations economically attractive and (b) in meeting emission control regulations governing said operations. Examples of non-renewable resources under this resolution are waste lubricating oil and waste paper.

ENVIRONMENTAL PROTECTION STUDY GROUP

1. Be it resolved that the Public Advisory Committee recommend that all further construction of the Kananaskis Road on a new alignment be delayed until the Environment Conservation Authority's "Eastern Slopes" hearings have been completed and recommendations made public.
2. Be it resolved that a standard design be developed for recreation and tourist roads for the mountain, foothill and prairie regions for incorporation in the highway design manual.
3. The Environmental Protection Study Group wishes to draw to the attention of the Public Advisory Committee the following resolutions passed at the meeting of September 18, 1972:
 - That a moratorium be declared on lakeshore development in Alberta and that regional planning commissions be instructed to zone all lakeshores in such a way to preserve substantial areas of wild land.
 - In lakeshore zoning, ample consideration be given to those urban inhabitants who cannot afford time or money for extensive travel.
 - Additional funds should be provided for research on lakeshore conservation and development.
4. That the Public Advisory Committee request the Minister of the Environment to publish and release to the public before the end of 1972 the documents entitled:
 - The impact on the environment of surface mining in Alberta - Report and Recommendations, December 1971 - January 1972.
 - Public Hearings on a proposal to restore water levels in Cooking and Hastings Lakes - Report and Recommendations, August 1971.

(Editor's note: these reports have been released and are available from the Environment Conservation Authority)

5. That the Environmental Protection Study Group wishes to draw to the attention of the Public Advisory Committee deficiencies in the "Off-Highways Vehicle Act" and make the following recommendations for the improvement approved by the Study Group on September 18, 1972:
 - Off-highways vehicles must be licensed annually so they are clearly identifiable
 - Drivers of off-highways vehicles must be registered with a minimum age of 14
 - There must be minimum and maximum fines

- All drivers must have third party insurance
 - All off-highways vehicles must meet noise and pollution standards
 - Research must be promoted to provide information on the effects of off-highways vehicles on wildlife and vegetation
 - Areas of use must be drawn up.
6. Whereas there is no adequate definition of policy statement differentiating the role and purpose of the following: natural areas, IBP-CT areas, ecological reserves, wilderness areas, primitive recreation areas, provincial parks, federal bird sanctuaries; a full review of parks and natural areas preservation and recreation policy should be undertaken so as to provide explicit definitions and statements of purpose concerning the roles to be played by each type of area. In addition, an inventory of all such areas should be compiled.

RENEWABLE RESOURCES STUDY GROUP

1. That prior to the implementation of programs or contracts concerning public lands, the public, or at least appropriate public advisory committees, be given comprehensive information on the proposed action for review and possible recommendations for amendment. This review should be allowed adequate time.
2. That through the public hearings and the report of the Environment Conservation Authority, the management objectives in the Eastern Rockies foothills region be clearly and realistically defined, before any new plans and agreements concerning the use and conservation of the region are decided upon.
3. That pending water allocation and pollution issues between provinces, such as the case of Peace/Mackenzie system, be resolved by making use of the provisions of the Canada Water Act to set up joint management bodies for the entire system.
4. The federal government must take a more active role in encouraging and supporting efforts to establish outdoor recreational parks close to population centres. Outdoor recreation should be easily accessible to people. Outdoor recreation facilities close to cities would take some of the heavy pressure from the national parks which have a protective and not only a recreation function.
5. Reserve immediately all class A and in any event not less than 20 per cent of total shorelands of lakes and the sea for the public at large, and provide access and use facilities as the need arises.

6. That statutes be enacted requiring that adequate environmental impact statements be prepared and published in full before any major private or public developments take place, wherever public lands and water, and expenditure of public funds are involved.
7. No final operating ground rules for the Grande Prairie Pulp Mill Forest lease should be approved before the report of the Environment Conservation Authority on the Forest Utilization Hearings can be taken into consideration.
8. Roadside and stubble burning:
 - Roadside and railroad rights-of-way should never be burned in the spring
 - Stubble burning should not be allowed except under special municipal permits. All municipalities in Alberta should pass appropriate by-laws under the Alberta Soil Conservation Act.
 - There is need for more public information on stubble burning practices which would hold risk to wildlife and general fire hazards to a minimum.

NON-RENEWABLE RESOURCES STUDY GROUP

1. Whereas a major problem in Alberta is the question of whether to develop and how to develop our non-renewable resources with minimum environmental damage, and the problem is particularly important in mountain areas and in connection with exploration as well as with actual extraction; be it resolved that in those areas where non-renewable resources are to be developed there should be adequate provision for environmental reclamation and enhancement so that the area and region should not suffer damage to renewable resources.
2. Whereas the government, on behalf of persons, corporations, and government departments, is the custodian of our historical resources and must accept responsibility for their preservation; be it resolved that this body supports the proposed Alberta legislation for the preservation of historical and archaeological resources which sets forth the mechanism by which historical and archaeological sites can be preserved or salvaged, and further supports the establishment of an archaeological survey as an essential part of the act.
3. Whereas paleontological and geological formations are part of the resources, of which we all are custodians, that record the total history of the earth; be it resolved that legislation be implemented for the preservation of outstanding geological and paleontological formations.

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